## ENGINEERING

Regional Supervisor, Branch of Wildlife Refuges

February 24, 1959

Regional Engineer

Tewaukon Refuge, North Dakota - 1959 Water Management Plan

We have no comments on the subject plan copy of which is returned herewith.

Our files indicate water rights as follows:

	White Lake	Cloud Lake
Seasonal use (ac-ft)	4251	312
Appropriation		
Approved (ac-ft)	11,449	709 9/1/34 8/30/37
Priority date	9/1/34 8/30/37	9/1/34
Appr. Approved date	8/30/37	8/30/37

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John D. Umberger

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Regional Director, Minneapolis, Minnesota

Jamuary 22, 1959

Refuge Manager, Towankon Refuge, Cayuga, N. Dak.

Ammeal Water Management Program - 1959

No manipulation of water levels was done in 1958. Two stop logs were removed for three days from one tube in the Cutler Marsh control in late July when a flow from Silver Leke, west of the refuge, reached the unit. This was simply an attempt to return game fish to Lake Towaukon, and did not result in a lowered water level. Current conditions and recommendations for 1959 are submitted as follows.

Clouds Lake is about 15 inches below outlet level; no manipulation is possible.

Maite Lake is about seven inches below outlet level.

A beaver dem in the outlet will hold back about an 18 inch head of water, if sufficient runoff occurs. This will have to be watched closely to prevent damage to the county road grade along the south side. Provided no road damage is probable, the beaver dam will be left intact until carp are through spawning and then will be removed to draw down the lake to normal and expose the spawn. A situation favorable to this procedure occurred last year, but the beaver dam was not removed.

A full reservoir was maintained by runoff last year until mid August. It was apparent that water dopth in the marsh area was not sufficient to thin out the cattail stand, at least not the first year. If the procedure outlined for White Lake can be carried out to destroy carp space, it is proposed that Cutler Marsh be lowered 10 inches below spillway level for the same purpose a few days before the release from White Lake. In that way a great deal of space could be destroyed and the water level of each unit restored to normal.

In order to carry out the manipulations for White Lake and Cutler Marsh, conditions will have to be just right. I don't propose to endanger the county road on the south side of White Lake just to make this process possible. It may be that the low beaver dam will have to be term out—it may even be necessary to destroy some beaver to keep the channel clear, in the event of heavy runoff. Some day a small control structure will have to be placed in this channel to regulate the flow.

Another requirement for this manipulation is that

Cutler March must be at or near spillway level at the time of drawn down. This is because it would not be wise to reduce the level more than ten inches below the spillway at this time of year (June). The flow from White Lake would restore all of this loss—assuming the desirable head of water can be retained in White Lake.

Lake Towaukon is presently 12 inches below spillway. We manipulation is desired, so the lake may seek its own level at or below spillway level.

Prospects for ranoff are poor right now. Nearly all potholes are dry and the surface soil is very dry. There is practically no snow on the ground at the present time, so the extent and character of the precipitation during the next two months will largely determine our runoff this spring.

Kermit D. Dybsetter